Honeywell

PRODUCT STEWARDSHIP SUMMARY

Hexafluorozirconium acid 45 %

H_2ZrF_6 45% / H_2O 55% / HF 0.5%

Chemical Name:	Dihydrogen hexafluorozirconiumdiuide aqueous solution
Synonyms:	Hexafluorozirconic acid solution, Dihydrogen hexafluorozirconate, 45% w/w aq., Zirconate(2-), hexafluoro-, dihydrogen, Fluorozirconic acid
CAS Number:	12021-95-3 (Mixture of 7732-18-5(~55%), 12021-95-3 (45%), and 7664-39-3 (0.5%))
CAS Name:	Hexafluorozirconic acid
EC (EINECS) Number:	234-666-0 (for CAS #12021-95-3)
Revision Date:	February 2019

- Hexafluorozirconium acid 45 % is used commonly in industrial settings as a precursor material for the manufacture of films used to coat ceramics, to synthesize glass used in prescription eyeglasses and as a common corrosion inhibitor on steel and other metal surfaces.

- Hexafluorozirconium acid 45 % is a colorless, odorless liquid mixture, completely soluble in water and stable under recommended storage conditions. It is corrosive to metals. This product is incompatible with strong acids, bases, and should be stored away from metals as contact with metals can result in the release of hydrogen gas that can be explosive. This mixture is predominantly composed of 45% dihydrogen hexafluorozirconate(2-), 54.5% water and hydrofluoric acid comprising approximately 0.5%.

- Given its major uses, the primary exposure to this chemical occurs in the industrial setting. For workers, good manufacturing and industrial hygiene practices should be followed to prevent or reduce exposure. Workplace exposure limits for have been established for use of this product in worksite safety programs. See the Safety Data Sheet (SDS) for additional information. In contact with fire, hexafluorozirconium acid 45 % decomposes to release hazardous hydrogen fluoride. Fire or intense heat may cause its outer package to rupture violently so it should be stored under controlled room temperatures.

- This mixture is toxic if swallowed, inhaled, and can cause severe skin burns and eye damage. Ingestion and significant inhalation exposure to this product can release fluoride ions that can cause severe systemic effects including hypocalcemia, hypomagnesemia and hyperkalemia resulting in electrolyte imbalance and cardiac arrhythmias.

- This product is not known to be genotoxic or cause reproductive or developmental harm.

- This mixture is not anticipated to be a carcinogen in humans based on studies conducted by NTP, IARC, or OSHA.

- The aquatic toxicity and ecological effects of this product are not known. Hexafluorozirconium acid 45 % is inorganic and, therefore, biodegradability data is not relevant. However, discharge into the environment should be avoided and this product should not be flushed into surface water or sanitary sewer systems. Instead, spillages should first be neutralized with lime or sodium hydroxide solution and the spilled material collected and placed into an appropriate container for proper disposal to an approved waste disposal plant.

- Please **contact us** for more information. Additional information may also be found at the following links:

  European Chemicals Agency- Substance Information- Dihydrogen hexafluorozirconate(2-)

  PubChem - Tetrafluorozirconium;Dihydrofluoride

Version 1.0
Last Revision Date: February 2019

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